To: Matt Francis[m.francis@erllc.com]; Petri, Elliott[Elliott.Petri@WestonSolutions.com]; Myers, Craig[Myers.Craig@epa.gov]
Cc: Sandoval, Joni[Sandoval.Joni@epa.gov]; Williams, Laura[williams.laura@epa.gov]
From: Way, Steven
Sent: Wed 9/9/2015 5:03:41 PM
Subject: RE: Pipeline questions - HDPE pipe vendor / procurement

Matt,

Based on the reviews from START, ERRS, and EPA (OSCs) there is a consensus that the APTec proposal is the best value. The one item that needs to be resolved is the adequacy of the pipe size between the base of the slope (Red and Bonita Laydown area) to Gladstone. If one line is to be used, it needs to be adequately sized to pass potentially higher flows following runoff.

Please proceed with the award with the understanding that the question needs to be answered.

Steve

Steven Way

Federal On-Scene Coordinator

Emergency Response Unit

US EPA - Region 8

1595 Wynkoop Street

Denver, CO 80202

Office: 303-312-6723

From: Matt Francis [mailto:m.francis@erllc.com]
Sent: Tuesday, September 08, 2015 3:29 PM
To: Petri, Elliott; Myers, Craig; Way, Steven
Subject: RE: Pipeline questions

Thanks Elliott, the pressures identified are what I needed to justify the DR7 upgrade. I've got enough now to make the case, just need confirmation of what configuration is wanted to get APTec started.

[redacted]
justified from a procurement point of view. Let me know if you concur and what configuration you would like.

Thanks

Matt

From: Petri, Elliott [mailto:Elliott.Petri@WestonSolutions.com]
Sent: Tuesday, September 08, 2015 10:34 AM
To: Matt Francis <m.francis@erllc.com>; Craig Myers <Myers.Craig@epa.gov>; Steven Way <Way.Steven@epa.gov>
Subject: Fwd: Pipeline questions

Hi Matt, Craig and Steve,

I asked my reviewer to estimate max flow in a 6" pipe and the DR7 pipe, please see the exchange below. It requires more detail than I have him for exact calcs, but it looks like APT met the 1000gpm design criteria.

Thanks,

Elliott

Elliott Petri, PE

Weston Solutions, Inc.

1435 Garrison St, Ste 100

Lakewood, CO 80215

Ph: 303-729-6156

Cell: 719-216-2754

Fax: 303-729-6101

Sent from a tiny phone screen, most likely with sun glare. Please excuse typos!

Elliot,

From what you have described the total drop on the pipe is around 550 feet. This means if the pipe was full because the valves were shut on the bottom the static head at the bottom of the pipe would be about 240 psi. HDPE DR 7 pipe is rated at 267 psi so it can hold the static pressure. This does not account for water hammer which may increase the pressure substantially. HDPE DR 11 is rated at 160 psi. As for the capacity, the ID of 6-inch HDPE DR 7 is 4.619" so if water was flowing at 120 ft/sec, the pipe would carry about 500 gpm and at 20 ft/sec 1000 gpm. It's really hard to calculate a max capacity for the pipe based on the information we have, but 20 ft/sec would be a good guess as the max velocity in the pipe. Call if you have questions.

Thanks,

Dave

From: Elliott

The slope at the worst is 35% over 850lf,....um the slope at the top is extremely rough (run over drop) ~500/50, the bottom more like 8% for 2500 ft. There are some variable changes but from a quick snap shot of my mind this is a really rough go.

Thanks,

Elliott

Elliott Petri, PE

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"Dave" wrote:

What can you give me for details on the pipe alignment? Slope?

From: Petri, Elliott

Sent: Tuesday, September 08, 2015 7:21 AM

To: Dave

Subject: Pipeline questions

Hi Dave,

Can you calculate the max capacity of the GKM 6" line APTec proposed and justify the DR7 pipe the proposed as well...they want to award today.

Thanks,

Elliott

Elliott Petri, PE

Weston Solutions, Inc.

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